

trifluoroethane (HFC-143a), chloropentafluoroethane (CFC-115), and pentafluoroethane (HFC-125), comprising the steps of:

contacting the first mixture with an extractive agent selected from the group consisting of:

hydrocarbon extractive agents consisting of hydrocarbons having from 5 to 9 carbon atoms and having a normal boiling point greater than about 30°C and less than about 155°C,

oxygen-containing extractive agents consisting of alcohols having a normal boiling point greater than about 60°C and less than about 100°C and represented by the formula $C_xH_{2x+1}OH$, wherein x is from 1 to 3, and ketones having a normal boiling point greater than about 50°C and less than about 110°C and represented by the formula $C_yH_{2y+1}COC_zH_{2z+1}$, wherein y and z are 1 or greater and y+z is at most 5, and

chlorocarbon extractive agents consisting of chlorocarbons having a normal boiling point greater than about 39°C and less than about 150°C and represented by the formula $C_sH_{2s+2-t}Cl_t$, wherein s is 1 or 2 and t is from 2 to 4 to form a second mixture,

separating difluoromethane (HFC-32) from at least one halocarbon of the second mixture by extractively distilling the second mixture, and

recovering difluoromethane (HFC-32) substantially free of at least one halocarbon, with the proviso that when the halocarbon is pentafluoroethane (HFC-125), the chlorocarbon extractive agent may not be methylene chloride and when the halocarbon is 1,1,1-trifluoroethane (HFC-143a), the extractive agent may not be an alcohol.

REMARKS

By the present amendment, claim 1 has been amended. The claims now pending are 1-11. A marked-up version of the rewritten claims is attached as a separate page to this amendment and is titled "Version With Markings to Show Changes Made". Reconsideration and favorable action are respectfully requested.

RE: Examiner's statement in the March 27, 2001 office action "This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required."

An abstract on a separate sheet is submitted herewith.

RE: Examiner's statement in the March 27, 2001 office action "The compound "chlorodifluoromethane" in claim 1, line 3 is abbreviated as (CFC-12) which appears to be inconsistent with the specification..."

The term "chlorodifluoromethane" in claim 1 has been amended to read dichlorodifluoromethane, consistent with the specification's teaching at: page 3, lines 24 and